



Product Evaluation

WIN2226 | 0617

Engineering Services Program

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: WIN-2226

Effective Date: June 1, 2017

Re-evaluation Date: April 2018

Product Name: Series SH-8100, Single Hung Vinyl Window, Impact Resistant

Manufacturer: Custom Window Systems, Inc.
1900 SW 44th Ave.
Ocala, FL 34474
(352) 368-6922

General Description:

System	Description	Label Rating	Design Pressure Rating
1	Series SH-8100 PVC Single Hung Window Fin/Flange	H-R65 36x62 Missile Level D	+65/-75 psf
2	Series SH-8100 PVC Single Hung Window Fin/Flange	H-LC65 53x76 Missile Level D	+/-65 psf
3	Series SH-8100 PVC Single Hung Window Oriel/Flange	LC-PG70 52x96 Missile Level D	+/-70 psf
4	Series SH-8100 PVC Single Hung Window Oriel/Flange	LC-PG70 52x72 Missile Level D	+/-70 psf
5	Series SH-8100 PVC Single Hung Window Flange	LC-PG70 52x62 Missile Level D	+/-70 psf
6	Series SH-8100 PVC Single Hung Window Flange	LC-PG70 36x71 Missile Level D	+/-60 psf
7	Series SH-8100 PVC Single Hung Window Flange	LC-PG70 36x71 Missile Level D	+/-70 psf

General Description (continued):

System	Description	Label Rating	Design Pressure Rating
8	Series SH-8100 PVC Single Hung Window Fin	LC-PG70 36x71 Missile Level D	+/-55 psf
9	Series SH-8100 PVC Single Hung Window Fin	LC-PG70 36x71 Missile Level D	+/-65 psf
10	Series SH-8100 PVC Single Hung Window Twin Fin/Flange	H-R65 74x63 Missile Level D	+/-65 psf
11	Series SH-8100 PVC Single Hung Window Twin Fin/Flange	H-R65 74x72 Missile Level D	+/-65 psf

Product Dimensions:

System	Overall Size	Operating Sash	Fixed Daylight Opening
1	36" x 62"	31-5/16" x 30-5/16"	Sash 28" x 27" Fixed 31-13/16" x 27"
2	53" x 76"	49-11/16" x 37-5/16"	Sash 46-3/8" x 34" Fixed 48-15/16" x 33-15/16"
3	52" x 96"	48-9/16" x 30-3/16"	Sash 45-1/4" x 26-7/8" Fixed 47-13/16" x 61-1/16"
4	52" x 72"	48-3/8" x 30-3/16v	Sash 45-1/16" x 26-7/8" Fixed 47-11/16" x 37-1/16"
5	52" x 62"	48-3/8" x 30-3/16"	Sash 45-1/16" x 26-7/8" Fixed 47-11/16" x 26-13/16"
6	36" x 71"	32-1/4" x 34-5/8"	Sash 28-15/16" x 31-3/8" Fixed 31-9/16" x 31-3/8"
7	36" x 71"	32-1/4" x 34-5/8"	Sash 28-15/16" x 31-3/8" Fixed 31-9/16" x 31-3/8"
8	36" x 71"	32-1/4" x 34-5/8"	Sash 28-15/16" x 31-3/8" Fixed 31-9/16" x 31-3/8"
9	36" x 71"	32-1/4" x 34-5/8"	Sash 28-15/16" x 31-3/8" Fixed 31-9/16" x 31-3/8"
10	74" x 63"	32-5/16" x 30-3/16"	Sash 29" x 26-7/8" Fixed 31-9/16" x 26-13/16"
11	74" x 72"	32-15/16" x 35-5/16"	Sash 29-5/8" x 32" Fixed 32-3/16" x 31-15/16"

Product Identification (Certification Label on Window):

System		
1	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-723 and 138-725 Air/Water/Structural, CAR 138-267 and 138-269 Impact
	Product Name	8100 PVC Fin/Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05, ASTM E 1886/ASTM E-1996-02/05, Missile Level D

Product Identification (Certification Label on Window): (continued)

System		
2	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-722 and 138-724 Air/Water/Structural, CAR 138-266 and 138-268 Impact
	Product Name	8100 PVC Fin/Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05, ASTM E 1886/ASTM E-1996-02/05, Missile Level D
3	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1365 Air/Water/Structural, CAR 138-563 Impact
	Product Name	8100 PVC Flange Frame Impact Single Hung Oriel
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08, ASTM E 1886-05, ASTM E-1996-05/09, Missile Level D
4	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1031 Air/Water/Structural, CAR 138-507 Impact
	Product Name	8100 PVC Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08, ASTM E 1886-02/04/05, ASTM E-199602/04/06/09, Missile Level D
5	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1047 Air/Water/Structural, CAR 138-510 Impact
	Product Name	8100 PVC Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08, ASTM E 1886-02/04/05, ASTM E-1996-02/04/06/09, Missile Level D
6	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1091 Air/Water/Structural, CAR 138-530 Impact
	Product Name	8100 PVC Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08, ASTM E 1886-05, ASTM E-1996-05/09, Missile Level D
7	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1092 Air/Water/Structural, CAR 138-532 Impact
	Product Name	8100 PVC Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08, ASTM E 1886-05, ASTM E-1996-05/09, Missile Level D
8	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1091 Air/Water/Structural, CAR 138-531 Impact
	Product Name	8100 PVC Fin Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-85, ASTM E 1886-05, ASTM E-1996-05/09, Missile Level D

Product Identification (Certification Label on Window): (continued)

System		
9	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-1092 Air/Water/Structural, CAR 138-533 Impact
	Product Name	8100 PVC Fin Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08, ASTM E 1886-05, ASTM E-1996-05/09, Missile Level D
10	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-475 Air/Water/Structural, 138-255 Impact
	Product Name	8100 PVC Fin/Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05, ASTM E 1886/ASTM E-1996-02/05, Missile Level D
11	Certification Agency	Keystone
	Manufacturer's Name or Code Name	CAR 138-703 Air/Water/Structural, 138-260 Impact
	Product Name	8100 PVC Fin/Flange Frame Impact Single Hung
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-05, ASTM E 1886/ASTM E-1996-02/05, Missile Level D

Impact Resistance:

System	Impact Resistant	Requirement
1-11	Yes	These products satisfy TDI's criteria for protection from windborne debris in the Inland I and Seaward zone. Install the assemblies at a height on the structure that does not exceed the design pressure rating for the assemblies.

Acceptance of Smaller Assemblies: Window assemblies with dimensions equal to or smaller than those specified are acceptable with the limitations specified in this report.

Installation:

System	Impact Resistant	Requirement
1-11	Type of Installation	Install the windows in accordance with drawings No: TDI-155 Systems 1 and 2. Sheets 1 through 6 of 6 TDI-882 System 4. Sheets 1 through 6 of 6
	Wall Framing	TDI-812 System 5. Sheets 1 through 6 of 6 TDI-957 Systems 6 and 8. Sheets 1 through 6 of 6
	Fasteners	TDI-958 Systems 7 and 9. Sheets 1 through 6 of 6 TDI-440 System 10. Sheets 1 through 6 of 6
	Fastener Location/Spacing	TDI-491 System 11. Sheets 1 through 6 of 6 The above drawings dated November 12, 2015. And drawing. TDI-295 System 3. Sheets 1 through 6 of 6 dated November 16, 2015.
	Fastener Penetration	All drawings signed, sealed and dated on September 29, 2016 by Lucas A. Turner, P.E.

Note: Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.